

Claims

- [c1] 1. A system of interlocking surfaces on bowler's finger pad cover and on a bowling ball finger hole insert for producing a force to counteract shifting of the ball relative to the bowler's finger pad and the contact area made between the finger pad cover and the finger hole insert, comprising,
- a. first means for mounting an interlocking three dimensional surface on a finger pad;
 - b. second means for mounting an interlocking three dimensional surface on the finger hole of a bowling ball;
 - c. said first and second means for co-acting to produce a counter force opposed to movement of said first means relative to said second means.
- [c2] 2. The system of claim 1, wherein,
- d. said first means includes means defining a primary axis and said second means includes means defining a matching primary axis and said first and second means producing said counter force at an angle to said primary or said matching primary, axis.
- [c3] 3. The system of claim 2, wherein , said counter force is produced at an orthogonal angle.

- [c4] 4. The system of claim 1, wherein,
e. said second means includes means for limiting the depth of insertion of said first means into said finger hole.
- [c5] 5. The system of claim 1, wherein,
f. said first means includes means for covering the finger tip and for providing a substantially inelastic contact area between said finger tip and said finger hole.
- [c6] 6. The system of claim 1, wherein,
g. said first means includes means forming an elongated stud and said second means includes means for forming a groove for interlocking with said stud.
- [c7] 7. The system of claim 1, wherein,
h. said first means includes means for forming at least one hemisphere protrusion and said second means includes means for forming a hemisphere indentation for interlocking with said hemisphere protrusion.
- [c8] 8. A bowlers finger pad cover and bowling ball finger hole or finger hole insert with matching three dimensional surfaces for aligning the finger pad cover with the finger hole or finger hole insert, comprising,
a. a finger pad cover having a primary axis and including a three dimensional surface with an interlocking pattern;

b. a finger hole or finger hole insert, having a matching primary axis, corresponding to said primary axis, including a three dimensional surface with a interlocking pattern matching said finger pad cover three dimensional surface.

9. The bowler's finger pad cover and bowling ball finger hole or finger hole insert, of claim 8, wherein,

c. said interlocking patterns arranged substantially in the direction of said primary axis and said matching primary axis.

[c9] 10. The bowler's finger pad cover and bowling ball finger hole or finger hole insert, of claim 9, wherein,

d. said finger hole or finger hole insert, and said finger pad cover, are inelastic materials.

[c10] 11. The bowler's finger pad cover and bowling ball finger hole or finger hole insert, of claim 8, wherein said finger pad cover three dimensional surface is a stud extending substantially in the direction of said primary axis and said finger hole or finger hole insert three dimensional surface is a groove.

[c11] 12. The bowler's finger pad cover and bowling ball finger hole or finger hole insert, of claim 8, wherein said finger pad cover three dimensional surface is at least one hemisphere protrusion and said finger hole or finger

hole insert three dimensional surface is a hemisphere indentation.

[c12] 13. The bowler's finger pad cover and bowling ball finger hole or finger hole insert, of claim 8, wherein said finger pad cover three dimensional surface is a plurality of studs disposed on opposed sides of said primary axis and said finger hole or finger hole insert three dimensional surface is a plurality of grooves.

[c13] 14. A system for controlling the alignment of a bowler's middle finger with a bowling ball, when lifting the ball at its release, comprising,
a. first means for interlocking a finger hole of a bowling ball with a bowler's finger;
b. said first means including second means for mounting in a finger hole of a bowling ball and third means for mounting on the finger pad of a bowler's finger; and
c. said first means for interlocking for holding said bowler's finger pad in alignment with said bowling ball.

[c14] 15. The system of claim 14, wherein,
d. said first means for interlocking includes means for defining a longitudinal axis and means for developing a counter force to a force intersecting with said longitudinal axis.

- [c15] 16. The system of claim 15, wherein,
e. said first means for interlocking includes means for separation of said second means and said third means.
- [c16] 17. The system of claim 14, including,
f. means for protecting the tip of said bowler's finger from the force of the bowling ball at its release and for transferring substantially all of the accelerating force for said bowler's finger tip to said bowling ball.
- [c17] 18. The system of claim 14, wherein said first means includes a means for forming a groove in said second means and means for forming a stud in said third means.
- [c18] 19. The system of claim 14, wherein said first means includes a means forming a hemisphere indentation in said second means and means forming a hemisphere protrusion in said third means.
- [c19] 20 The system of claim 14 wherein said first means includes a means forming a plurality of grooves in said second means and means for forming a plurality of studs in said third means.
- [c20] 21. A method for interlocking sets of surfaces on a bowler's finger pad cover and on the surface of a bowling ball finger hole or finger hole insert for producing a

force to counteract shifting of the ball relative to the bowler's finger pad and the contact area made between the finger pad cover and the finger hole or finger hole insert interior surface, comprising the steps of,

- a. arranging interlocking three dimensional surfaces on a finger pad cover and on a bowling ball insert, to develop a force counter to shifting of the relative position of said finger pad cover and said bowling ball insert or the contact area made between the finger pad cover and the finger hole insert;
- b. placing said interlocking three dimensional surface on a finger pad in mating relationship with said interlocking three dimensional surface on the interior surface of a bowling ball finger hole or finger hole insert.

[c21] Claim 22. The method of claim 21, including the steps of,

- c. using said interlocking sets of surfaces to develop a force counter to a force for shifting the said contact area made between the finger pad cover and the finger hole insert or relative position of said finger pad cover and the finger hole insert.

[c22] Claim 23. The method of claim 21, including the step of, limiting the depth of insertion of said finger pad cover into said finger hole insert.

- [c23] Claim 24. In a system for controlling the alignment of a bowler's middle finger with a bowling ball, when lifting the ball at its release, a first means for interlocking a finger hole of a bowling ball with a bowler's finger and for aligning the bowler's finger with said bowling ball.
- [c24] Claim 25. In a system of claim 24, wherein, said first means includes means for defining a longitudinal axis and means for developing a counter force to a force intersecting with said longitudinal axis.
- [c25] Claim 26. In a system of claim 24, wherein, said first means includes means for separation of said bowler's finger and said finger hole.
- [c26] Claim 27. In a system of claim 24, including means for protecting the tip of said bowler's finger from the force of the bowling ball at its release and for transferring substantially all of the accelerating force for said bowler's finger tip to said bowling ball.
- [c27] Claim 28. In a system of claim 24, including means for developing a cooperating force between said bowler's finger and said finger hole, for countering a force directed against said alignment.
- [c28] Claim 29. A system of interacting surfaces for controlling the alignment of a bowler's finger with a bowling ball,

comprising,

- a. first means for insertion into in a bowling ball finger hole;
- b. second means for mounting on a finger pad and for forming a contact area with said first means when said second means is inserted in said first means;
- c. said first and second means including at least one means on at least one of said first or second means for producing a frictional force opposing the displacement of said first means or said second means, from said contact area.

[c29] Claim 30. The system of claim 29, including at least one means on at least one of said first or second means for deforming and in response to a force from the other of said first or second means.

[c30] Claim 31. The system of claim 30 wherein, said wherein said first or second means is means forming an adhesive layer.

[c31] Claim 32. The system of claim 29, wherein said first or second means forms a two dimensional surface for forming a frictional contact with the other of said first means or second means and including means for making said first or second means inelastic to the force of the bowling ball at its release.

[c32] Claim 33. The system of claim 29, wherein said first or second means forms a two dimensional surface for forming a frictional contact with the other of said first means or second means and including means for making said first or second means elastic to the force of the bowling ball at its release.

[c33]